Department of Environment, Land, Water and Planning

Dr Kris Funston
Executive General Manager, Network Regulation
Australian Energy Regulator
GPO Box 520
MELBOURNE VIC 3001

Ref: MBR047474
/SBR012633

By electronic lodgement: networksinformation@aer.gov.au

Dear Dr Funston

REVIEW OF NETWORK INFORMATION REQUIREMENTS

Thank you for the opportunity to make a submission on behalf of the Victorian Government to the Australian Energy Regulator's (AER's) *Network Information Requirements Review* discussion paper. The Victorian Government appreciates the AER's ongoing engagement on the important issue of network data provision.

Energy reliability and affordability are a priority for the Victorian Government. Ensuring all Victorians can benefit from distributed energy resources (DER) supports energy affordability, reduces carbon emissions and helps to achieve renewable energy targets.

DER offer direct benefits for energy users in the form of lower power bills, and also offer wider benefits for all Victorians. With the right technological standards and regulatory settings, DER will also increase system security and the reliability of supply, as well as reduce energy system costs as Victoria transitions to a clean energy economy.

In addition to generating and consuming energy on-site, Victorian consumers are also increasingly sharing clean energy. For example, the Victorian Government's landmark $1.3 billion Solar Homes Program will support 778,500 households over ten years to install solar photovoltaic (PV) panel systems, solar hot water systems or solar batteries at their home, with more than 193,000 systems installed since the program's launch in 2018. The program includes a new Virtual Power Plant (VPP) Pilot Program, which is supporting customers to participate in innovative battery aggregation projects. Additionally, the Victorian Government's $10.92 million Neighbourhood Battery Initiative will fund a range of neighbourhood-scale battery ownership and operational models, to unlock the role that neighbourhood-scale batteries can play in Victoria's transitioning electricity system and deliver benefits to Victorian customers.

The Victorian Government notes that the discussion paper introduces a number of new processes for information reporting which it strongly supports (see below). The Government also notes that the AER's approach focusses heavily on how the AER intends to require information to be reported. There is a risk that this misses the opportunity to consider the type of information that should be required to be reported publicly to support innovation and competition in a transforming energy market. As the existing data requirements are close to ten years old, this review is an opportunity to improve 'the consistent, relevant and transparent information about regulated networks… in the long-term interest of consumers'. As such, the Victorian Government calls for the regulated public provision of data at lower network levels (on the low-voltage network), where significant gaps that limit third-party access to competitive markets and efficient investment currently occur.

VICTORIA State Government

The Victorian Government recommends that data requirements should address current gaps in the provision of low voltage network data.

The Victorian Government strongly supports the AER's proposal to develop regulatory information orders to further progress the standardisation of data and information requirements imposed on the energy networks, as well as to broaden the consultation process beyond network businesses to non-network stakeholders in the development of future requirements. The AER's objective to enhance data consistency through this process will better ensure energy networks address information asymmetries and provide consistent network information to non-network stakeholders. The Victorian Government views this as a priority to improve competition, and capitalise on technology and market innovations, particularly in the distribution network.

The provision of data at low-voltage network levels on network constraints and opportunities for non-network solutions would enable non-network parties (e.g., community energy groups, local councils and energy retailers) to locate available capacity in the network for varying sized DER connections and support Victorian Government policy and priorities for the continued development of DER. Energy networks are best placed to identify the highest value locations and opportunities for DER connections given their understanding of network needs and infrastructure. However, as regulated monopolies, it is important that they make this information available to all potential providers of DER services (including consumers). Under the Consumer Data Right (CDR), the Australian Energy Market Operator (AEMO) provides data on energy consumption patterns to trusted third parties when authorised by the consumer. Authorised sharing of such information can enable consumers to make more informed choices.

To support efficient investment in DER by non-network parties, the Victorian Government recommends that the information requirements for energy networks explicitly specify the public provision of data on the low-voltage network, where significant gaps currently occur. The AER's proposed new data model has the potential to be a vehicle to address these gaps, through the 'network metrics' data category. The bulk of DER technologies (e.g., customer assets, neighbourhood batteries, public EV-charging infrastructure and community-based renewable energy projects) are connected at these levels.

Non-network parties have requested access to aggregated solar export and consumption/load data, and installed solar PV capacity at the distribution substation level. They require network constraint maps that detail the extent and type of constraints, as well their nature (for example, reverse power flow overload constraints during times of high solar penetration and low demand and associated voltage increases, as well as maximum demand overload constraints and consequent voltage decreases). This data should be specified as part of the 'network metrics data category' as it can enable efficient investment and innovation opportunities that address network challenges and support communities to get the most of their solar systems, or investment in efficiently placed neighbourhood batteries.

The Victorian Government strongly supports the AER's proposal to develop an information access system consistent with Australian Government standards to facilitate data sharing with all stakeholders.

The Victorian Government is actively fostering growth in DER innovation through multiple projects, including the Solar Victoria VPP Pilot Program and the Neighbourhood Battery Initiative.

Initially run as a pilot, Solar Victoria's VPP Pilot Program aims to trial how an orchestrated fleet of behind-the-meter batteries can provide both system and local network services, including voltage management services and increasing grid resilience for communities. Project proponents have

raised the lack of access to distribution network data as a major barrier to future growth and identifying optimal network locations.

As part of the Victorian Government's $10.92 million Neighbourhood Battery Initiative, engagement with non-network stakeholders (community energy groups, local councils and energy retailers) has also highlighted the importance of access to specific network data in establishing a viable neighbourhood battery project. Proponents have faced difficulty obtaining access to relevant low-voltage network data to inform the feasibility of their projects and have emphasised that support is required to facilitate this process. For example, non-network proponents require network data to:

- determine opportunities to provide network support and access network support value streams to maximise the benefits of a neighbourhood battery for the community; and
- identify optimal locations for a neighbourhood battery such as those targeting network constraints, providing back-up support and co-locating with existing network infrastructure. This could include providing solar soaking services to communities that enable a greater proportion of locally generated solar to be consumed within the local network.

Facilitating data sharing that meets the needs of a wide range of stakeholders, with different budgets, IT systems and accessibility requirements, is a vital step in the development of DER. As an example, a consistent, easy to understand and publicly accessible geospatial mapping platform which provides timely low-voltage data on network constraints, would enable non-network parties to deliver efficient non-network solutions and promote fair competition with regulated monopolies. The potential use cases for this improved information include:

- locating non-network DER assets (e.g., neighbourhood batteries, VPP fleets)
- identifying potential DER optimisation strategies to benefit customers and the network (e.g. how and when to best charge/discharge from DER)
- identifying network support opportunities utilising DER to alleviate network constraints
- informing where there is network capacity to locate public EV fast charging infrastructure and depots for large company and public transport bus fleets
- informing the design of DER-rich urban development precincts
- locating community-based renewable power projects
- identifying network resilience opportunities using DER
- enabling efficient investment in non-network solutions

Consistent presentation of network constraints across energy networks through geospatial heat mapping can provide valuable information on areas where maximum demand overload can occur, typically during days of extreme heat or cold, as well as where reverse power flow overload constraints exist in areas of high solar penetration during times of low demand. The respective voltage drops and increases have negative impacts on consumer appliances and can lead to increased energy consumption and reduced output from solar panels. In Victoria, smart meters enable visibility of data at the distribution substation and low voltage circuit network levels, which provides opportunities to utilise DER to alleviate these constraints in the form of non-network solutions, and enable efficient investments to defer network augmentation. In areas where constraints are minimal, DER storage such as neighbourhood-scale batteries can be used primarily to maximise market revenue.

The most valuable investments by non-network parties will come from value-stacking batteries where they can also provide community and network support services to enable more community-generated solar to be hosted by the network, including solar soaking that provides lower cost energy in the middle of the day. This will contribute to increased decarbonisation, as well as leverage other revenue streams (such as wholesale market benefits through aggregators or retailers, and provision of Frequency Control Ancillary Services (FCAS) to maintain network system frequency). This could be implemented in areas of constraint caused by maximum demand or voltage rises from solar exports during minimum demand periods.

Energy networks have highlighted that consumer data privacy issues may act as a barrier to the public provision of low-voltage network data. Given that data at the distribution substation level, including network constraint maps would involve de-identified aggregated data, the Victorian Government does not anticipate that it will yield significant privacy concerns, and is committed to working with energy networks and the AER to ensure they do not materialise. A collaborative approach from all stakeholders, including from the AER to establish solutions to these barriers, will benefit all market participants.

Maintaining current assurance processes and introducing collaborative processes between updates of network information requirements will be vital in addressing the dynamic energy sector transition.

The Victorian Government supports the AER maintaining the requirement that information and data submitted by the networks is subject to review by independent audit or assurance providers. This will provide additional value to the AER's specification of data requirements that include explicit data validation rules, and data consistency cross-checks to improve the quality of submitted data.

The Victorian Government welcomes the AER's proposal to review network information requirements every four years and supports the proposed collaborative processes occurring between reviews to address changing information requirements. For example, the significant growth in DER and EV uptake and increasing volume of community DER and changing consumer preferences will require more frequent review to address the dynamic nature of the energy sector transition. This is further emphasised by the Australian Energy Market Operator's (AEMO) Draft 2022 Integrated System Plan (ISP) Step Change scenario, which indicates significant growth in coordinated DER storage and distributed PV, as well as a surge in EV uptake in the 2030s driven by declining costs, greater consumer choice and more charging infrastructure. AEMO's 2021 Inputs, Assumptions and Scenarios Report that will be used to develop the final ISP, predicts EV uptake of 905,000 by 2030-31 in Victoria alone.

The current regulatory obligations on energy networks to comply with quality of supply requirements, as well as incentives for improving supply reliability and efficient cost reductions, can go further in enabling innovative solutions to network challenges, such as unlocking increased solar hosting capacity. While energy networks are already likely to be investing in internal tools to better manage network constraints, including mapping of identified constraints to inform investment decisions, there is no regulatory obligation to publish network constraint maps. As part of changing data requirements necessitated by the evolving impact of DER on the operation of electricity networks, the Victorian Government calls for the regulated public provision of network constraint maps at lower network levels in a timely manner. This will address information asymmetries and enhance consumer benefits through more efficient investment in DER technologies.

Thank you again for the opportunity to provide input into the AER's discussion paper. If you would like to discuss any of the issues raised in this submission further, please contact Ralph Griffiths, Executive Director, Energy Strategy, DELWP on [redacted] or by email at [redacted]

Yours sincerely

Anh Mai
Acting Deputy Secretary, Energy
Department of Environment, Land, Water and Planning

19 / 05 / 2022